

CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Alderman Mark Laredo, Land Use Committee Chairman

From: John Daghlion, Associate City Engineer

Re: Special Permit – 283 Melrose Street

Date: December 1, 2015

Review Memo #6

CC: Lou Taverna, PE City Engineer
Linda Finucane, Associate City Clerk
Alexandria Ananth, Chief Planner
Stephen Pantalone, Sr. Planner
Terrance Morris, Esquire

In reference to the above site, I have the following comments for a plan entitled:

*283 Melrose Street
Newton, MA
Prepared by: Peter Nolan & Associates LLC
Dated: 3/25/'15
Revised: 6-12-'15
8/31/'15
11/3/'15
11/30/'15
&
Drainage Report*

Executive Summary:

These plans were received yesterday afternoon, although a totally complete and thorough review have not been completed; at first blush it appears that the engineer of record has

addressed our concerns regarding drainage, access, construction management, and operation & maintenance of the on-site stormwater management system.

As with every Special Permit plans, there will be “*housekeeping*” items that need to be tweaked prior to applying for a Building Permit as these plans are not construction documents; but for your consideration this memo was generated to move this project.

The proposed plan indicates two separate structures to be built upon an acre site that is relatively flat. The residential building has a proposed underground parking garage that is accessed via a ramp that is 12-feet wide. Upon our previous review, a traffic signal has been added to control entering and exiting of vehicles. The turning template plan has been approved by the Fire Department for safe vehicular circulation within the driveway for emergency and fire vehicles. The applicant has added a heating system to melt snow and ice on the ramp. The cross-section of the ramp indicates an 8% downgradient to a 14% and transitioning to an 8% downgradient into the underground garage, the engineer of record has demonstrated with detailed profiles with various vehicles, entering & exiting the underground garage is not an issue.

The existing site currently has no stormwater collection or water quality management system. The submission shows various utility improvements including an on-site drainage collection system which includes all roof runoff; trench drains at all the driveway aprons, deep sump manhole and gas traps and an infiltration system. The infiltration was sized on the “net increase” however; the actual design takes the entire runoff from all impervious surfaces not the net impervious surface as require per the City policy; thus the system needs to be expanded to handle the actual flow from the entire site not just the net increase.

The site is large enough to allow expansion of the proposed underground leaching system to handle the actual runoff collected as designed. The applicant’s proposed stormwater system improves water quality being generated from the site compared to existing conditions, and once the underground infiltration system is expanded it reduces runoff to its boundaries. The drainage calculations are based on an 8.78 inches over a 24-hour period; the City standard is 6.6 inches over the same period, thus a conservative design is proposed. An overflow connection to the City’s drainage system is incorporated for storms events exceeding the 100 year event. This is what is meant by “housekeeping” item.

An additional test pit and percolation test was performed as requested at the level of the proposed infiltration system and the results are acceptable.

Conditions if Project is approved:

1. Finalized drainage report with corrections consistent with the Massachusetts Stormwater Policy (MSWP) specifically to acceptable infiltration rates, (i.e. Rawls rates for the given soil group.
2. Once a contractor is selected, a Phase II General Construction (NPDES) Permit will need to be filed with DEP & EPA. A Stormwater Pollution Prevention Plan (SWPPP) will need to be developed.
3. Hydraulic calculations of the on-site pipe network will be needed. As well as capacity calculation of the City drainage system for the overflow connection. Pre & post Closed Circuit Television (CCTV) inspection of the City's drainage system will be required for the overflow connection.
4. The existing water & sewer services to the building shall be cut and capped at the main and be completely removed from the main and the site then properly back filled. The Engineering Division must inspect this work; failure to having this work inspected may result in the delay of issuance of the Utility Connection Permit.
5. With the exception of natural gas service(s), all utility trenches with the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E, detail is available in the City of Newton Construction Standards Detail Book.
6. All new sewer service and/or structures shall be pressure tested or videotaped after final installation is complete. Method of final inspection shall be determined solely by the construction inspector from the City Engineering Division. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and a written report is received by the City Engineer. ***This note must be added to the final approved plans.***
7. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and

a written report is received by the City Engineer. *This note must be added to the final approved plans.*

8. Fire flow testing is required for the proposed fire suppression system. The applicant must coordinate this test with both the Newton Fire Department and the Utilities Division; representatives of each department shall witness the testing, test results shall be submitted in a write report. Hydraulic calculation shall be submitted to the Newton Fire Department for approval.
9. All water connections shall be chlorinated & pressure tested in accordance to AWWA and the City of Newton Construction Standards and Specifications prior to opening the connection to existing pipes.
10. Approval of the final configuration of the water service(s) shall be determined by the Utilities Division, the engineer of record should submit a plan to the Director of Utilities for approval
11. All trench excavation contractors shall comply with Massachusetts General Laws Chapter 82A, Trench Excavation Safety Requirements, to protect the general public from unauthorized access to unattended trenches. Trench Excavation Permit required. This applies to all trenches on public and private property. *This note shall be incorporated onto the plans*
12. All tree removal shall comply with the City's Tree Ordinance.
13. The maximum curb cut allowed is 22-feet wide, the site plan shows one curb cut that is 35-feet wide along Ash Street, the Commissioner of the DPW will allow this provided sidewalks and ADA pedestrian curb cuts are improved surrounding and in the vicinity of this project site. Since there is also a lot of utility modification all the sidewalks shall be upgraded to current standards, including granite curbing and cement concrete sidewalks that should extend to the entire limits of the frontage along Melrose Street. The applicant has agreed to this condition.
14. The contractor is responsible for contacting the Engineering Division and scheduling an appointment 48 hours prior to the date when the utilities will be made available for an inspection of water services, sewer service, and drainage system installation. The utility is question shall be fully exposed for the inspector to view; backfilling shall only take place when the City's Inspector has given their approval. *This note should be incorporated onto the plans*
15. The applicant will have to apply for Street Opening, Sidewalk Crossing, and Utilities Connecting permits with the Department of Public Works prior to any construction. *This note must be incorporated onto the site plan.*

16. The applicant will have to apply for a Building Permits with the Department of Inspectional Service prior to any construction.
17. Prior to Occupancy Permit being issued, an As-Built Plan shall be submitted to the Engineering Division in both digital format and in hard copy. The plan should show all utilities and final grades, any easements and final grading. *This note must be incorporated onto the site plan.*
18. If a Certificate of Occupancy is requested prior to all site work being completed. *This note must be incorporated onto the site plan.*

If the plans are updated it is the responsibility of the Applicant to provide all City Departments [Conservation Commission, ISD, and Engineering] involved in the permitting and approval process with complete and consistent plans.

If you have any questions or concerns please feel free to contact me @ 617-796-1023.